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(54) Tyre balancing compositions

(57) The invention relates to tyre balancing compositions having improved balancing properties comprise a visco-plastic gel and solid bodies having an average smallest dimension in the range of 0.5-5 mm; preferably 1-4 mm, more preferably around 3 mm. When applied in a layer to the inside of a motor vehicle tyre, the compositions act by allowing the solid bodies move through the gel and to concentrate in areas to counteract imbalances. The solid bodies preferably have an average ratio α between their smallest and their largest dimension of $\alpha \leq 2$, more preferably $\alpha \leq 1.5$, especially around 1. The visco-plastic gel preferably has a storage modulus (G') between 1000 Pa and 25000 Pa at 22°C, a loss

modulus (G'') smaller than the storage modulus, and a critical yield stress above 3 Pa at 22°C. The bodies may be shaped as prolate or oblate ellipsoids, cylinders, rectangular parallelepipeds, or spheres, or mixtures of such bodies; they may have an apparent specific gravity in the range of 500-3000 kg/m³, preferably 600-2000 kg/m³, in particular 700-1000 kg/m³, especially 800-900 kg/m³; they may be made from polyolefins, polystyrene, polyvinyl chloride, polyamide, rubber or glass. The weight ratio between the solid bodies and the gel is from 10:1 to 1:10, preferably from 5:1 to 1:5, in particular from 2:1 to 3:1, such as from 1:1 to 1:2. The invention further concerns a tyre balancing kit and a method for balancing automobile wheel assemblies.

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